

**DRAFT FINAL
EXPANDED ENGINEERING EVALUATION/COST ANALYSIS (EEE/CA)
FOR THE
McLAREN TAILINGS SITE
COOKE CITY, MONTANA**

Engineering Services Agreement DEQ/MWCB 401027
Task Order Number 05

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4.0 SUMMARY OF THE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

The summary of ARARs was compiled from a draft document describing ARARs for abandoned mine sites produced by the DEQ/MWCB. These ARARs were reviewed to develop a listing of potential Federal and State ARARs for the McLaren Tailings Site. The Federal and State ARARs are summarized on Table 4-1 and Table 4-2, respectively. Appendix E provides detailed descriptions of potential Federal and State ARARs. The description of the Federal and State ARARs includes summaries of legal requirements that, in many cases, attempt to set out the requirement in a simple fashion, useful in evaluating compliance with the requirement. In the event of any inconsistency between the law itself and the summaries in this section, the ARAR is ultimately the requirement as set out in the law, rather than any paraphrase provided herein.

Table 4-1. Summary of Preliminary Federal Applicable or Relevant and Appropriate Requirements.

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
FEDERAL CONTAMINANT-SPECIFIC			
<u>Safe Drinking Water Act</u>	40 USC § 300		Relevant and Appropriate
National Primary Drinking Water Standards	40 CFR Part 141	Establishes health-based standards maximum contaminant levels (MCLs) for public water systems.	Relevant and Appropriate
National Secondary Drinking Water Standards	40 CFR Part 143	Establishes aesthetic-based standards (secondary MCLs) for public water systems.	Relevant and Appropriate
<u>Clean Water Act</u>	33 USC. § 1251-1376		Relevant and Appropriate
Water Quality Standards	40 CFR Part 131 Quality Criteria for Water 1976, 1980, 1986	Sets criteria for water quality based on toxicity to aquatic organisms and human health.	Relevant and Appropriate
National Pollutant Discharge Elimination System (NPDES)	40 CFR Part 122	General permits for discharge from construction.	Relevant and Appropriate
<u>Clean Air Act</u>	42 USC § 7409		
National Primary and Secondary Ambient Air Quality Standards	40 CFR Part 50	Air quality levels that protect public health.	Applicable
<u>Resource Conservation and Recovery Act</u>	42 USC § 6901		
Lists Of Hazardous Waste	40 CFR Part 261, Subpart D	Defines those solid wastes that are subject to regulation as hazardous wastes under 40 CFR Parts 262-265 and Parts 124, 270 and 271.	Applicable

Table 4-1. Summary of Preliminary Federal Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
FEDERAL LOCATION-SPECIFIC			
<u>National Historic Preservation Act</u>	16 USC § 470; 36 CFR Part 800; 40 CFR 6.310(b)	Requires Federal Agencies to take into account the effect of any Federally-assisted undertaking or licensing on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places and to minimize harm to any National Historic Landmark adversely or directly effected by an undertaking.	Applicable
<u>Archaeological and Historic Preservation Act</u>	16 USC § 469; 40 CFR § 6.301(c)	Establishes procedures to provide for preservation of historical and archaeological data which might be destroyed through alteration of terrain as a result of a Federal construction project or a Federally licensed activity or program.	Applicable
<u>Protection of Wetlands Order</u>	40 CFR Part 6, Appendix A, Executive Order No. 11,990	Avoid adverse impacts associated with destruction or loss of wetlands and avoid support of new construction in wetlands if a practicable alternative exists.	Applicable
<u>Historic Sites, Buildings and Antiquities Act</u> Appendix A, Executive Order No. 11, 990	16 USC §§ 461-467; 40 CFR § 6.301(a)	Requires Federal agencies to consider the existence and location of landmarks on the National Registry of Natural Landmarks to avoid undesirable impacts on such landmarks.	Applicable
<u>Fish and Wildlife Coordination Act</u>	16 USC §§ 2901-2912; 40 CFR Part 6.302(g)	Requires consultation when Federal department or agency proposes or authorizes any modification of any stream or other water body and adequate provision for protection of fish and wildlife resources.	Applicable
<u>Floodplain Management Order</u>	40 CFR Part 6	Requires Federal agencies to evaluate the potential effects of actions they may take in a floodplain to avoid the adverse impacts associated with direct development of a floodplain.	Applicable

Table 4-1. Summary of Preliminary Federal Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
<u>Endangered Species Act</u>	16 USC §§ 1531-1543; 40 CFR 6.302(h); 50 CFR Part 402	Activities may not jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify a critical habitat.	Applicable
<u>Bald Eagle Protection Act</u>	16 USC §§ 668	Requires consultation with the USFWS during reclamation design and reclamation construction to ensure that any cleanup of the site does not unnecessarily adversely affect the Bald Eagle or Golden Eagle.	Applicable
<u>Migratory Bird Treaty Act</u>	16 USC §§ 703	Establishes a federal responsibility for the protection for the international migratory bird resource and requires consultation with the USFWS during reclamation design and reclamation construction to ensure the cleanup of the site does not unnecessarily impact migratory birds. Specific mitigative measures may be identified for compliance with this requirement.	Applicable

Table 4-1. Summary of Preliminary Federal Applicable or Relevant and Appropriate Requirements (continued)

FEDERAL ACTION-SPECIFIC			
Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
<u>Clean Water Act</u>	33 USC § 1342		Relevant and Appropriate
NPDES	40 CFR Part 122	Requires permits for the discharge of pollutants from any point source into waters of the United States.	Relevant and Appropriate
<u>Surface Mining Control and Reclamation Act</u>	30 USC §§ 1201-1328	Protects the environment from effects of surface mining activities.	Relevant and Appropriate
	30 CFR Part 784	Governs underground mining permit applications and minimum requirements for reclamation and operations plans.	Relevant and Appropriate

Table 4-1. Summary of Preliminary Federal Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
<u>Surface Mining Control and Reclamation Act (continued)</u>	30 CFR Part 816	Outlines permanent program performance standards for surface mining activities.	Relevant and Appropriate
<u>Hazardous Materials Transportation Act</u>	49 USC §§ 1801-1813		Relevant and Appropriate
Standards Applicable to Transporters of Hazardous Waste	40 CFR Part 263	Regulates transportation of hazardous waste.	Relevant and Appropriate
<u>Resource Conservation and Recovery Act</u>			
Land Disposal	40 CFR Part 268	Establishes a timetable for restriction of burial of wastes and other hazardous materials.	Applicable
Criteria for Classification of Solid Waste Disposal Facilities and Practices	40 CFR Part 257	Establishes criteria for use in determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment and thereby constitute prohibited open dumps.	Applicable
Standards for Transporters of Hazardous Waste	40 CFR Part 263	Establishes standards which apply to persons transporting hazardous waste within the U.S. if the transportation requires a manifest under 40 CFR Part 262.	Applicable
Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities	40 CFR Part 264	Establishes minimum national standards which define the acceptable management of hazardous waste for owners and operators of facilities which treat, store, or dispose of hazardous waste.	Applicable

Table 4-1. Summary of Preliminary Federal Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
<u>Occupational Safety And Health Act</u>	29 USC § 655		
Hazardous Waste Operations And Emergency Response	29 CFR 1910.120	Defines standards for employee protection during initial site characterization and analysis, monitoring activities, materials handling activities, training & ER.	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
STATE CONTAMINANT- SPECIFIC			
<u>Montana Water Quality Act</u>	75-101 <u>et seq.</u> , MCA	Laws to prevent, abate, and control the pollution of state waters.	Applicable
Regulations Establishing Ambient Surface Water Quality Standards	ARM 16.20.604-624	Provides the water use classification for various streams and imposes specific water quality standards per classification.	Applicable
Regulations Establishing Ambient Surface Water Quality Nondegradation Standards	ARM 16.20.707-714	Applies nondegradation requirements to any activity which could cause a new or increased source of pollution to State waters and outlines review procedures.	Applicable
Regulations Establishing Waste Treatment Standards	ARM 16.20.631-633	Imposes waste treatment requirements to restore and maintain the quality of surface waters to applicable water use categories. Treatment standards are based on the State's policy of nondegradation, and present and anticipated beneficial uses of the receiving waters.	Applicable
	ARM 16.20.925	Technology-based treatment for MPDES permits.	Applicable
Montana Groundwater Pollution Control System Regulations	ARM 16.20.1002	Classifies groundwater into Classes I through IV based on the present and future most beneficial uses of the groundwater and states groundwater is to be classified to actual quality or actual use, whichever places the groundwater in a higher class.	Applicable
	ARM 16.20.1003	Establishes groundwater quality standards for groundwater classification, and should be consulted.	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Montana Groundwater Pollution Control System Regulations (continued)	ARM 16.20.1011	Requires that any groundwater whose existing quality is higher than the standard for its classification must be maintained at that high quality unless degradation is allowed under the principles established in 75-3-303 MCA, and the nondegradation rules at ARM 16.20.706 <u>et.seq.</u>	Applicable
<u>Public Water Supplies Act</u>	75-6-101, MCA	Establishes public policy of MT to “protect, maintain, and improve the quality and potability of water for public water supplies and domestic uses”.	Relevant and Appropriate
Public Water Supply Regulations	ARM 16.20.204	Establishes maximum contaminant levels (MCLs) for inorganic chemicals in community water systems.	Relevant and Appropriate
	ARM 16.20.205	Establishes the maximum turbidity contaminant levels for public water supply systems which use surface water in whole or in part.	Relevant and Appropriate
	ARM 16.20.922	Adopts and incorporates language for toxic pollutant effluent standards found in 40 CFR Part 129.	Relevant and Appropriate
	ARM 16.20.923	Adopts and incorporates language for effluent limitations and standards of performance found in 40 CFR Subpart N (except 40 CFR Part 403).	Relevant and Appropriate

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
<u>Clean Air Act Of Montana</u>	75-2-102, MCA	It's Montana's policy is to achieve and maintain such levels of air quality as will protect human health and safety and, to the greatest degree practicable, prevent injury to plant and animal life and property.	
Air Quality Regulations	ARM 16.8.815	No person shall cause or contribute to concentrations of lead in the ambient air which exceed the following 90-day average: 1.5 micrograms per cubic meter of air.	Applicable
	ARM 16.8.818	No person shall cause or contribute to concentrations of particulate matter in the ambient air such that the mass of settled particulate matter exceeds the following 30-day average: 10 grams per square meter.	Applicable
	ARM 16.8.821	No person may cause or contribute to concentrations of PM-10 in the ambient air which exceed the following standard: 1) 24-hr. avg.: 150 micrograms per cubic meter of air, with no more than one expected exceedance per year; 2) Annual avg.: 50 micrograms per cubic meter of air.	Applicable
	ARM 16.8.1302	Lists certain wastes that may not be disposed of by open burning, including oil or petroleum products, RCRA hazardous wastes, chemicals, and treated lumber and timbers.	Relevant and Appropriate

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Air Quality Regulations (continued)	ARM 16.8.1401	States “no person shall cause or authorize the production, handling, transportation or storage of any material unless reasonable precautions to control emissions of airborne particulate matter are taken.”	Applicable
	ARM 16.8.1404	States no person shall cause opacity of 20% over 6 minutes.	Applicable
	ARM 16.8.1424	Sets forth emission standards for hazardous air pollutants.	Applicable
	ARM 26.4.761	Requires a fugitive dust control program be implemented in reclamation operations.	Relevant and Appropriate
<u>Occupational Health Act of Montana</u>	50-70-101, MCA	The purpose of this act is to achieve and maintain such conditions of the work place as will protect human health and safety.	Applicable
Occupational Air Contaminants Requirements	ARM 16.42.102	Establishes maximum threshold limit values for air contaminants believed that nearly all workers may be repeatedly exposed day after day without adverse health effects.	Applicable
Occupational Noise Regulations	ARM 16.42.101	Addresses occupational noise levels and provides that no worker shall be exposed to noise levels in excess of specified levels.	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
STATE LOCATION-SPECIFIC			
<u>Floodplain and Floodway Management Act</u>	76-5-401, MCA	Limits the uses permissible in a floodway and generally prohibits permanent structures, fill, or permanent storage of materials or equipment.	Applicable
	76-5-402 MCA	Lists the permissible uses within the floodplain but outside of floodway.	Applicable
	76-5-403, MCA	Lists certain uses which are prohibited in a designated floodway, including any change that will cause water to be diverted from the established floodway, cause erosion, obstruct the natural flow of water, or reduce the carrying capacity of the floodway, or the concentration or permanent storage of an object subject to flotation or movement during flood level periods.	Applicable
Floodplain Management Regulations	ARM 36.15.216	The factors to consider in determining whether a permit should be issued to establish or alter an artificial obstruction or nonconforming use in the floodplain or floodway are set forth in this section.	Applicable
	ARM 36.15.601	Open space uses allowed in the floodway without a permit.	Applicable
	ARM 36.15.602	Uses allowed in the floodway, which require a permit.	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Floodplain Management Regulations (continued)	ARM 36.15.603	Proposed diversions or changes in place of diversions must be evaluated by DNRC to determine whether they may significantly affect flood velocities.	Applicable
	ARM 36.15.604	Prohibits new artificial obstructions or nonconforming uses that will significantly increase the upstream elevation of the base flood 0.5 feet or significantly increase flood velocities.	Applicable
	ARM 36.15.605	Identifies artificial obstructions and nonconforming uses that are prohibited within the designated floodway except as allowed by permit and includes “a structure or excavation that will cause water to be diverted from the established floodway, cause erosion, obstruct the natural flow of water, or reduce the carrying capacity of the floodway...”. Solid waste disposal and storage of highly toxic, flammable, or explosive materials are also prohibited.	Applicable
	ARM 36.15.606	Identifies flood control works that are allowed with designated floodways pursuant to permit and certain conditions including: flood control levies and flood walls, riprap, channelization projects, and dams.	Applicable
	ARM 36.15.701	Describes allowed uses in the flood fringe.	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Floodplain Management Regulations (continued)	ARM 36.15.703	Prohibited uses within the flood fringe including solid and hazardous waste disposal and storage of toxic, flammable, or explosive materials.	Applicable
	ARM 36.15.801	Allowed uses where the floodway is not designated or where no flood elevations are available.	Applicable
<u>Natural Streambed and Land Preservation Standards</u>	87-5-501, 502, and 504, MCA	Fish and wildlife resources are to be protected and no construction project or hydraulic project shall adversely affect game or fish habitat.	Applicable
	ARM 36.2.404	Proposed projects are to be evaluated by the appropriate conservation district based on criteria : 1) whether the project will pass anticipated sediment loads without creating harmful flooding or erosion problems upstream or downstream; 2) whether the project will minimize the amount of stream channel alteration; 3) whether the project will be as permanent a solution as possible and whether the method used will create a reasonably permanent and stable situation; 4) whether the project will minimize effects of fish and aquatic habitat; 5) whether the project will minimize turbidity or other water pollution problems; and , 6) whether the project will minimize adverse effects on the natural beauty of the area.	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
<u>Antiquities Act</u>	22-3-424, MCA	Heritage and paleontological sites are given appropriate consideration.	Relevant and Appropriate
	22-3-433, MCA	Evaluation of environmental impacts include consultation with State Historic Preservation Officer (SHPO).	Relevant and Appropriate
	2-3-435, MCA	A heritage or paleontological site is to be reported to the SHPO.	Relevant and Appropriate
Cultural Resource Regulations	ARM 12.8.503-508	Procedures to ensure adequate consideration of cultural values.	Relevant and Appropriate
STATE ACTION SPECIFIC			
<u>Montana Water Quality Act</u>	75-5-605, MCA	Pursuant to this section, it is unlawful to cause pollution of any state waters, to place any wastes in a location where they are likely to cause pollution of any state waters, to violate any permit provision, to violate any provision of the Montana Water Quality Act, to construct, modify, or operate a system for disposing of waste (including sediment, solid waste and other substances that may pollute state waters) which discharge into any state waters without a permit or discharge waste into any state waters.	Applicable
Montana Surface Water Quality Regulations	ARM 16.20.631	Industrial waste must receive treatment equivalent to the best practicable available control technology.	Applicable
	ARM 16.20.604-624	Provides for classification of state waters.	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Montana Surface Water Quality Regulations (continued)	ARM 16.20.625	Technology-based treatment for MPDES permits.	Applicable
	ARM 16.20.633	Requires that the State's surface waters be free from, among other things, substances that will create concentrations or combinations of materials that are harmful to human, animal, plant, or aquatic life. Moreover, no waste may be discharged and no activities may be conducted that can reasonably be expected to violate any of the standards.	Applicable
Nondegradation of Water Quality	ARM 16.20.708-714	Applies nondegradation requirements to any activity which would cause a new or increased source of pollution to state waters and outlines review procedures.	Applicable
<u>Montana Groundwater Act</u>			
Montana Groundwater Pollution Control System Regulations	ARM 16.20.1011	Requires that any ground water whose existing quality is higher than the standard for its classification must be maintained at that high quality in accordance with 75-5-303, MCA, and ARM 16.2.701 <u>et.seq.</u>	Applicable
	ARM 16.20.1002	Classifies groundwater into Classes I through IV based on the present and future most beneficial uses of the groundwater and states groundwater, and states that groundwater is to be classified to actual quantity or actual use, which ever places the groundwater in a higher class.	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Montana Groundwater Pollution Control System Regulations (continued)	ARM 16.20.1003	Establishes groundwater quality standards for groundwater classification.	Applicable
<u>Clean Air Act Of Montana</u>	75-2-102, MCA	It's Montana's policy is to "achieve and maintain such levels of air quality as will protect human health and safety and, to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the economic and social development of this state, and facilitate the enjoyment of the natural attractions of this state".	Applicable
Air Quality Requirements	ARM 16.8.815	No person shall cause or contribute to concentrations of lead in the ambient air which exceed the following 90-day average: 1.5 micrograms per cubic meter of air.	Applicable
	ARM 16.8.1302	Lists certain wastes that may not be disposed of by open burning.	Applicable
	ARM 16.8.1401 and 1404	No person shall cause or authorize the production, handling, transportation or storage of any material unless reasonable precautions to control emissions of airborne particulate matter are taken.	Applicable
<u>Montana Solid Waste Management Act</u>	75-10-201 et.seq., MCA	Public policy is to "control solid waste management systems to protect the public health and safety and to conserve natural resources whenever possible".	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Solid Waste Management Regulations	ARM 16.14.505 and 508-509	The standards for solid waste disposal are set forth in this provision and include: preclusion against location of solid waste disposal sites in a 100-year floodplain, a requirement that sites be located only in areas that will prevent the pollution of ground and surface waters and public and private water supplies, a requirement for drainage structures to be installed where necessary to prevent surface runoff from entering disposal areas and a requirement that sites be located to allow for reclamation. The standards also provide the process for applying for a solid waste management system license and operation and maintenance plan requirements.	Applicable
	ARM 16.14.520-521	General operational and maintenance requirements for solid waste management facilities.	Applicable
	ARM 16.14.523	Solid waste must be transported in such a manner as to prevent its discharge, dumping, spilling or leaking from the transport vehicle.	Applicable
<u>Montana Hazardous Waste Act</u> and <u>Underground Storage Tank</u> <u>Act</u>	5-10-402, MCA	It's the policy of the State to "protect the public health and safety, the health of living organisms, and the environment from the effects of the improper, inadequate, or unsound management of hazardous wastes".	Applicable

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Montana Hazardous Waste Regulations	ARM 17.54.701-705	<p>By reference to federal regulatory requirements, these sections establish standards for all permitted hazardous waste management facilities.</p> <p>1) 40 CFR 264.11 (incorporated by reference in ARM 17.54.702) establishes that hazardous waste management facilities must be closed in such a manner as to minimize the need for further maintenance and to control, minimize or eliminate, to the extent necessary to protect public health and the environment, post-closure escape of hazardous wastes, hazardous constituents, leachate, contaminated runoff or hazardous waste decomposition products to the ground or surface waters or the atmosphere.</p> <p>2) 40 CFR 264.228(a) (incorporated by reference by ARM 17.54.702) requires that at closure, free liquids must be removed or solidified, the wastes stabilized and the waste management unit covered.</p> <p>3) 40 CFR 264.228 and 310 (incorporated by reference by ARM 17.54.702) requires that surface impoundments and landfill caps must: (a) provide long-term minimization of migration of liquids through the unit; (b) function with minimum maintenance; (c) promote drainage and minimize erosion or abrasion of the final cover;</p>	Relevant and Appropriate

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Montana Hazardous Waste Regulations (continued)	ARM 17.54.701-705 (continued)	d) accommodate settling and subsidence; and (e) have a permeability less than or equal to the permeability of the natural subsoil present.	
		4) 40 CFR 264.119 (incorporated by reference in ARM 17.54.702) requires that, no later than 60 days after certification of closure of each hazardous waste disposal unit, the owner or operator submit a record of the type, location, and quantity of hazardous waste disposed in each unit. The regulation also gives time limits for recording a deed restriction, in accordance with state law, that will, in perpetuity, notify potential purchasers that the property has been used for waste disposal and that its use is restricted.	
	ARM 17.54.111-119	Establishes permit conditions, duration of permits, schedules of compliance, and requirements for recording and reporting.	
	ARM 17.54.130-131	Establishes contents of permit application.	
<u>Montana Strip and Underground Mine Reclamation Act</u>	82-4-231, MCA	Sets forth objectives that require the operator to reclaim and revegetate the land affected by his operation.	Relevant and Appropriate operation.

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
<u>Montana Strip and Underground Mine Reclamation Act</u> <u>(continued)</u>	82-4-233, MCA	Requires that after the operation has been backfilled, graded, topsoiled and approved, the operator shall establish a vegetative cover on all impacted lands.	Relevant and Appropriate
		Specifications for the vegetative cover and performance are provided.	Relevant and Appropriate
Backfilling and Grading Requirements	ARM 26.4.501	Gives general backfilling and grading requirements.	Relevant and Appropriate
	ARM 26.4.501A	Final grading requirements.	Relevant and Appropriate
	ARM 26.4.504	Provides that permanent impoundments may be retained under certain circumstances.	Relevant and Appropriate
	ARM 26.4.514	Gives contouring requirements.	Relevant and Appropriate
	ARM 26.4.519	The operator may be required to monitor settling of regraded areas.	Relevant and Appropriate
	ARM 26.4.520	Spoil material may be disposed of on-site in accordance with requirements of this section. Contains specific requirements for siting, surface runoff, construction of underdrains and revegetation.	Relevant and Appropriate
Hydrology Requirements	ARM 26.4.631	Reclamation operations must be planned and conducted to minimize disturbance to the prevailing hydrologic balance and to prevent material damage to the prevailing hydrologic balance.	Relevant and Appropriate

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Hydrology Requirements (continued)	ARM 26.4.633	Specifies that sediment controls must be maintained until the disturbed area has been restored and revegetation established.	Relevant and Appropriate
	ARM 26.4.634	Drainage design shall emphasize channel and floodplain premining configuration that blends with the undisturbed drainage system above and below, and will meander naturally, remain in dynamic equilibrium with the system, improve unstable premining condition, provide for floods, provide for long term stability of landscape, and establish a premining diversity of aquatic habitats and riparian vegetation.	Relevant and Appropriate
	ARM 26.4.635-637	Sets forth requirements for temporary and permanent diversions.	Relevant and Appropriate
	ARM 26.4.638	Sediment control measures shall be designed using the best technology currently available to prevent additional sediment to streamflows, meet the more stringent of federal or state effluent limitation, and minimize erosion.	Relevant and Appropriate
	ARM 26.4.640	Provides that discharge from sedimentation ponds, permanent and temporary impoundments, and diversions shall be controlled by energy dissipaters, riprap channels, and other devices, where necessary, to reduce erosion, prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance.	Relevant and Appropriate

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Hydrology Requirements (continued)	ARM 26.4.641	Sets forth methods for prevention of drainage from acid-and toxic-forming spoils into ground and surface waters.	Relevant and Appropriate
	ARM 26.4.642	Prohibits permanent impoundments with certain exceptions, and sets standards for temporary and permanent impoundments.	Relevant and Appropriate
	ARM 26.4.643-646	Provide for groundwater protection, groundwater recharge protection, and surface and groundwater monitoring.	Relevant and Appropriate
	ARM 26.4.649	Prohibits the discharge, diversion, or infiltration of surface and groundwater into existing underground mine workings.	Relevant and Appropriate
	ARM 26.4.650	All permanent sedimentation ponds, diversions, impoundments, and treatment facilities must be renovated postmining, to meet criteria specified in the design plan. All such temporary structures shall be regraded to the approximate original contour.	Relevant and Appropriate
Top Soiling, Revegetation, and Protection of Wildlife and Air Resource Regulations	ARM 26.4.701-702	Requirements for stockpiling soil.	Relevant and Appropriate
	ARM 26.4.703	Materials other than, or along with, soil for final surfacing of spoils or other disturbances must be capable of supporting the approved vegetation and postmining land use.	Relevant and Appropriate

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Top Soiling, Revegetation, and Protection of Wildlife and Air Resource Regulations (continued)	ARM 26.4.711	The section requires “a diverse, effective, and permanent vegetative cover of the same seasonal variety native to the area affected and capable of meeting the criteria set forth in 82-4-233 shall be established on all areas of land affected except water areas and surface areas of roads”.	Relevant and Appropriate
	ARM 26.4.713	Specifies that seeding and planting of disturbed areas must be conducted during the first appropriate period for favorable planting after final seedbed preparation; but not longer than 90 days after top soil placement.	Relevant and Appropriate
	ARM 26.4.714	According to this section, as soon as practical, a mulch or cover crop must be used on all regraded and resoiled areas to control erosion, to promote germination of seeds, and to increase moisture retention of soil until permanent cover is established.	Relevant and Appropriate
	ARM 26.4.716	Establishes the required method of revegetation and provides that introduced species may be substituted for native species as part of an approved plan.	Relevant and Appropriate
	ARM 26.4. 717	Whenever tree species are necessary, trees adapted for local site conditions and climate shall be used.	Relevant and Appropriate

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Top Soiling, Revegetation, and Protection of Wildlife and Air Resource Regulations (continued)	ARM 26.4.718	Soil amendments must be used as necessary to aid in the establishment of permanent vegetation. Irrigation, management, fencing, or other measures may also be used after review and approval by the department.	Relevant and Appropriate
	ARM 26.4.719	Livestock grazing on reclaimed land is prohibited until revegetation is established and can sustain managed grazing.	Relevant and Appropriate
	ARM 26.4.720	Sets annual department inspection requirements.	Relevant and Appropriate
	ARM 26.4.721	Section specifies that rills and gullies greater than 9 inches which form on the reclaimed area must be filled, graded or otherwise stabilized and the area reseeded.	Relevant and Appropriate
	ARM 26.4.723	Monitoring of vegetation, soils and wildlife.	Relevant and Appropriate
	ARM 26.4.724	Success of revegetation shall be measured on the basis of unmined reference areas.	Relevant and Appropriate
	ARM 26.4.725	Sets periods of responsibility and evaluation.	Relevant and Appropriate
	ARM 26.4.726	Sets means of measuring productivity.	Relevant and Appropriate
	ARM 26.4.728	Sets requirements for composition of vegetation.	Relevant and Appropriate

Table 4-2. Summary of Preliminary State Applicable or Relevant and Appropriate Requirements (continued)

Standard, Requirement Criteria Or Limitation	Citation	Description	ARAR Status
Top Soiling, Revegetation, and Protection of Wildlife and Air Resource Regulations (continued)	ARM 26.4.730-731	Revegetated area must furnish palatable forage in comparable quantity and quality during the same grazing period as the reference area.	Relevant and Appropriate
	ARM 26.4.733	Sets requirements and measurement standards for trees, shrubs, and half-shrubs.	Relevant and Appropriate
	ARM 26.4.751	Section requires that site activities must be conducted so as to avoid or minimize impacts to important fish and wildlife species, including critical habitat and any threatened and endangered species identified at the site.	Relevant and Appropriate
	ARM 26.4.761	Section requires fugitive dust control measures for site preparation and reclamation operations.	Relevant and Appropriate